

WATERSHED MANAGEMENT AREA 5 CRITERIA FOR OPEN SPACE PRESERVATION

100 Total Points Maximum

General Instructions

The criteria are broken down into two Roman Numeral-designated categories, environmental factors and geographic factors. Within each of these categories are sub-factors, designated by letter, related to the broader subject. Under each letter-designated factor are numbered criteria associated with a point value. After evaluation of a property for open space preservation using the environmental and geographic factors, the property should then be evaluated for acquisition, using the issues in the Acquisition Addendum.

I. Environmental Factors (up to 54 points maximum)

A. Aquifer/Groundwater Recharge Area/Tier 1 Wellhead Protection Area:

Aquifer is an underground bed or layer of earth, gravel or porous stone that yields water. High priority should be given to protecting the land above aquifers, which insure water supply purity (surface supplies and wells).

Groundwater Recharge Area: Groundwater means the portion of water beneath the land surface that is within the saturated zone. The saturated zone means the zone in which all the subsurface voids in the rock or soil are filled with water. Groundwater Recharge Area means land or water areas through which groundwater or aquifers are replenished through a function of precipitation, runoff, infiltration, and evaporation/transpiration.

Tier 1 Wellhead Protection Area

Tier 1 means an area surrounding a wellhead having a time of travel of two years (730 days) from the outer boundaries of this tier.

Time-of-travel means the average time that particles of water will take to travel in the saturated zone from a given point to a pumping well.

Wellhead protection area means an aquifer area described in plan view around a well, from within which groundwater is reasonably likely to flow to the well and through which groundwater pollution, if it occurs, is reasonably likely to pose a significant threat to the water quality of the well. The wellhead protection area is delineated by the use of a time-of-travel and hydrologic boundaries, and is further subdivided by multiple times of travel.

Wellhead means the well borehole and related equipment.

B. Reservoir Buffer Zone: A swathe of land 25' wide or greater covered by forest, shrubs or grass and serving to protect the drainage area to a river, river system or

other body of water that serves as a reservoir. Extensive buffer zones are rare in WMA 5 and shall be recognized as they perform a critical role in slowing and mitigating pollutants, providing green space and a habitat corridor.

- C. Wetlands: Defined by three criteria – soil type, water-loving plants, and hydrology. Wetlands shall be recognized as providing biochemical treatment of pollutants, flood prevention and wildlife breeding areas.

D. Waterways and Associated Lands

Headwaters of Streams: The source or origin of a river or stream.

State Open Waters or Streams: Those waters of the U.S. within the boundary of the State or subject to its jurisdiction that are not wetlands as defined by the Freshwater Wetlands Act, i.e., ponds, lakes, brooks, and rivers.

Water Frontage/Riparian Corridor: Consideration is given to those properties which contain, protect, or provide views or access to reservoirs, rivers, streams, brooks, creeks, ponds and lakes.

E. Woodlands

Climax/Mature Forest: A stable, biotic community of plants and animals at the end point of ecological succession. (Modern Physical Geography, Alan Strahler, 4th edition, 1992, John Wiley & Sons, Inc., New York.)

Immature Forest: A forest system that is still in a transitional stage of ecological succession. For example, in our region hardwood species such as oak trees typically dominate over softwood pine species. A forest that contains an even mix of hard and softwoods is an Immature Forest.

Successional Growth: The process in which communities of plants and animal species in a particular area are replaced over time by a series of different and usually more complex communities. (Living In the Environment, 7th edition, Miller, G, Tyler, Jr., 1992, Wadsworth Publishing, Belmont, CA.)

Old Growth Specimen Trees: Trees that are greater than 100 years old. Typical species for this area of the northeast are Oak, Beech, and Hemlock.

- F. Floodplains/Floodway: A belt of low, flat ground, present on one or both sides of a graded stream channel, subject to inundation by a flood about once annually and underlain by alluvium (fine grained sediments). Annual, 50, and 100-year floodplains are delineated on flood insurance maps created by the Federal Emergency Management Agency (FEMA).

50-year Floodplain: An area of land that has a statistical probability of flooding at least once within a 50-year period.

100-year Floodplain: An area of land that has a statistical probability of flooding at least once within a 100-year period.

G. Unusual Topographical Features

Steep Slope: Generally recognized as a slope of 15% or greater, as defined in the NJ State Plan, Statewide Policy 13, Open Lands and Natural Systems. Recognition is

given to the value of steep slopes being either a prevailing or present feature of the property.

Ridge Line/Bluff: As determined by the contour lines of the USGS quadrant maps, it's applicable to the eastern (Palisades) extremes of the watershed. (USGS quadrant maps are created by the US Geological Survey to illustrate a 7.5' quadrangle at a scale of 1 to 24,000. These maps show relevant physical and cultural features in the area including topographic elevation contour lines.)

Cave: A subterranean system of cavities formed in limestone by the carbonic acid action of circulating ground water. (Modern Physical Geography.)

Gorge: A steep-sided bedrock valley with a narrow floor limited to the width of a stream channel. (Modern Physical Geography.)

- H. Preservation of Wildlife Habitat/Vegetation: For this category, in addition to the outlined criteria, diversity of the landscape should be examined. It should be noted whether the property is in the fresh water or brackish water portion of the watershed. Look for marshes, bogs, gorges, and exemplary stands of trees and areas that provide particularly suitable and stable habitat for unusual species. (See New Jersey Administrative Code, 7:7A-1.4, Freshwater Wetlands Protection Act Rules Definitions, esp. those for "Critical Habitat for fauna or flora" and "Documented habitat for threatened and endangered species".)

Threatened and Endangered Species: See lists of wildlife and vegetation considered to be threatened and endangered species on Federal, County or Local levels. Reference the State and Federal Acts - Endangered and Nongame Species Conservation Act, N.J.S.A. 23:2A-1 et seq. and Endangered Species Act 1973, 16 U.S.C. 1531 et al.

Rare Biological Community: Does the property play host to animal or plant life that is rarely seen in the area or rarely seen in the numbers present within or adjacent to the site?

- I. Contamination: The best rating a project can get from this category is "0" – this is a negative assessment for property that has been subjected to dangerous dumping.
- Toxic Material: Material that causes death, disease, birth defects or other injury to organisms that ingest, absorb or contact them. Any chemical or material listed in the EPA rules as "Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986." (Principles of Toxicology, Stine, K. and Brown T. M., 1996, CRC Press, Inc., Boca Raton, FL.)
- Hazardous Waste: Any industrial by-product, especially from the manufacture of chemicals, that is destructive to the environment or dangerous to the health of people or animals. *Hazardous wastes often contaminate ground water.* (Random House Unabridged Dictionary, Second Edition, Stein, J., Ed., 1993, Random House, Inc.)
- Debris: Accumulation of materials non-threatening to human health such as minor litter and lawn and leaf waste.

II. Geographic Factors (up to 46 points maximum)

- A. Proximity of Protected Open Space: Recognition is given to properties which are directly contiguous with or within reasonable proximity to existing projected open space (parkland, nature preserve, environmentally sensitive land protected by conservation district or easement, land held for watershed protection).
- B. Proximity to Farmland: Farmland is a business through which an animal or vegetative edible or non-edible product is produced on the premises. Examples include growers of vegetables, herbs, flowers, trees, shrubs, livestock or livestock products.
- C. Scenic Views: A measure of whether the property provides the visitor with scenic views of the project area itself, or outlying lands, for example, from ridges or promontories.
- D. Passive Recreation Opportunities: Is there a formal system of trails, footpaths, or greenways on or adjacent to the property that permits walking, hiking, nature appreciation, and/or bicycling? A government entity, established community group, or non-profit agency should oversee proposed or existing trails, footpaths or greenways.
- E. Historic, Cultural, and Archeological Features: Does the site contain interesting remnants of human and/or geological history that are worthy of preserving for posterity? Evidence of this can be from the presence of existing structures or from recorded documentation. Emphasis should be on whether there was an active occurrence of a significant event at or immediately nearby the site.
- F. High Population Density: This category is intended to give recognition to the need for open space in the more urban, more developed regions of the watershed.
- G. Size: How large is the property? Properties that are 10 acres or larger in size are increasingly rare in the watershed, and should be given greater consideration.
- G. Location Within the Watershed: How does the location of the property relate to the overall watershed? Is it situated in the upper watershed which drains to potable water supply reservoirs, or in the lower tidal section of the watershed?

Acquisition Addendum (up to 50 points maximum)

This addendum should be considered after a property has been rated positively for preservation as open space. It concentrates on the issues related to the potential for acquiring the property, including cost, the pressure for development of the site for non-open space uses, and the support available for acquisition.

A. Suitability for Development

- Subdivision Plan approved by municipality or an application has been filed with and is under review by the municipality.
- Subdivision Plan underway but plans not yet filed.

Subdivision means the division of a lot, tract, or parcel of land into two or more lots, tracts, parcels or other divisions on land for sale or development.

Development means the following activities: (1) the division of a parcel of land into two or more parcels; (2) the construction, reconstruction, conversion, structural alteration, relocation, enlargement, or demolition of a structure, or of any mining, excavation, landfill, or deposition; and (3) any use, or change in the use, of any structure, or land, or extension of use of land.

B. Infrastructure Availability

- Availability of Roads, Public Water, or Sewers

Infrastructure means those capital facilities and land assets under public ownership, or operated or maintained for public benefit, that are necessary to support development and redevelopment and to protect the public health, safety, and welfare. Infrastructure systems may include, but are not limited to, transportation, energy, telecommunications, farmland retention, water supply, wastewater disposal, stormwater management, shore protection, open space and recreation, solid waste disposal, public health care, public education, higher education, arts, historic resources, public safety, justice, public administration, and public housing.

C. Cost: What is the asking price for sale of the property?

D. Project Support: Positive factors supporting acquisition of the property may include:

- 1.The municipality has passed a public referendum in favor of acquiring the property and/or maintaining it as open space.
- 2.Two or more municipalities have jointly applied for funds for acquisition of a property that spans their borders.
- 3.The subject municipality has established a Municipal Open Space Trust Fund for acquisition of this property or for any other open space purposes.

4. The property is owned by an individual, corporation or other entity that is willing to sell it for conservation purposes.

**WATERSHED MANAGEMENT AREA 5
RATING FORM FOR OPEN SPACE PRESERVATION**

I. ENVIRONMENTAL FACTORS (Up to 54 Points Maximum)

- A. Aquifer/Groundwater Recharge Area/Tier 1 Wellhead Protection Area
- 1. Present.....7
 - 2. Not Present.....0
- B. Reservoir Buffer Zone
- 1. Present.....7
 - 2. Not Present.....0
- C. Wetlands
- 1. Exceptional Resource Value.....6
 - 2. Intermediate Resource Value.....5
 - 3. Ordinary Value.....4
 - 4. Wetlands Buffer Zone.....2
 - 5. None.....0
- D. Waterways & Associated Lands (more than 1 response is possible-12 points maximum)
- 1. Headwaters of Streams.....6
 - 2. State Open Waters or Streams.....6
 - 3. Water Frontage or Riparian Corridor.....6
 - 4. None.....0
- E. Woodlands
- 1. Climax/Mature Forest.....6
 - 2. Immature Forest.....5
 - 3. Successional Growth or Old Growth Specimen Trees.....4
 - 4. None.....0
- F. Floodplains
- 1. Land within the Floodway.....5
 - 2. Land within 50-year Floodplain.....4
 - 3. Land within 100-year Floodplain.....2
 - 4. None.....0

G. Unusual Topographical Features	
1. Presence of Steep Slopes, Ridge Lines, Bluffs, Caves, Gorges.....	5
2. Not Present.....	0
H. Preservation of Wildlife Habitat/Vegetation	
1. Threatened and Endangered Species recognized by Federal EPA or by	
2. New Jersey State DEP.....	6
3. Rare Biological Community.....	5
4. None.....	0
I. Contamination	
1. Severe.....	- 9
2. Minor.....	- 6
3. None.....	0

II. GEOGRAPHIC FACTORS (Up 46 Points Maximum)

A. Proximity to Existing Protected Open Space	
1. Adjacent to, or Complements, Existing Open Space.....	7
2. No Significant Contribution.....	0
B. Proximity to Farmland	
1. Active Farm.....	5
2. Adjacent to, or Complements, Farmland/Is a Former Farm.....	4
3. No Significant Contribution.....	0
C. Scenic Views	
1. Contains or Complements Scenic Views.....	5
2. No Significant Contribution.....	0
D. Passive Recreation Opportunities	
1. Contains or Links to Proposed or Existing Trail & Greenway Plan.....	5
2. Provides Access to or Complements Proposed or Existing Trail.....	4
3. No Significant Contribution.....	0

E. Historic, Cultural, and Archaeological Features

1. Features Listed in the Bergen County Historic Sites Survey, Hudson County
Historic Preservation Plan, or Eligible for Listing on the National and State
Register of Historic Places.7
2. Presence of Known, Significant Historical or Archaeological Values.....5
3. No Significant Contribution.....0

F. High Population Density

1. Population Density of more than 6,900 persons per square mile.....5
2. Population Density between 2,701 and 6,900 persons per square mile.....4
3. Population Density less than 2,700 persons per square mile.....2

G. Size

1. 10 Acres in Size or Larger7
2. Between 1 and 10 Acres in Size.....5
3. Smaller than 1 Acre in Size.....2

H. Location Within the Watershed

1. Strategic Location.....5
2. Other Locations.....0

ACQUISITION ADDENDUM (Up to 50 Points Maximum)

A. Suitability for Development

1. Subdivision Approved.....12
2. Conforming Subdivision Application Filed.....8
3. Subdivision Plans Underway, But Not Yet Filed.....0

B. Infrastructure Considerations

1. Available Roads, Public Water, and Sewers.....6
2. Any Two Items Listed in 1 Above.....5
3. Any One Item Listed in 1 Above4
4. None of the Above.....0

C. Cost

1. Affordable.....12
2. Moderate.....8
3. Expensive.....0

D. Project Support (more than 1 response is possible-20 points maximum)

1. Passage of a Public Referendum in Support of the Project.....6
2. Contributions from Two or More Municipalities.....5
3. Municipal Open Space Trust Fund.....4
4. Owner Willing to Sell..... 5